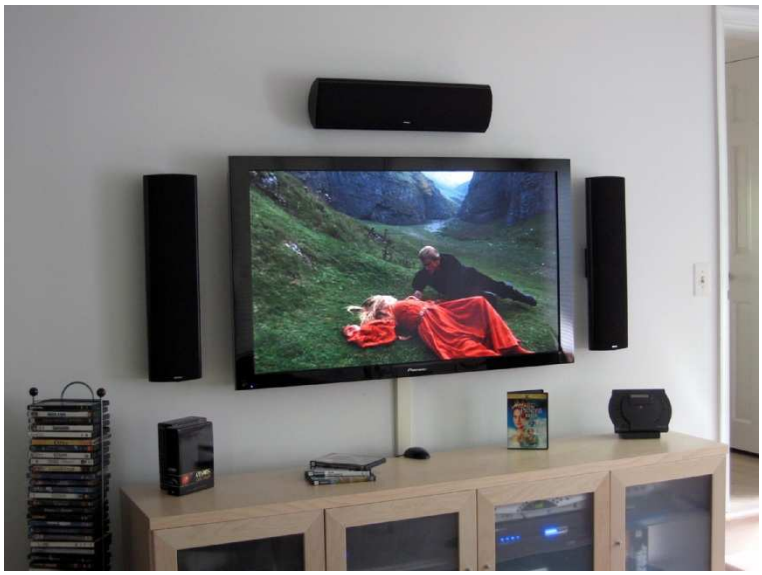
Merchant Square Building D Tenant TV, Telephone & Data User Guide



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Date:	November 2012
For:	Residents of Merchant Square
Contents:	Instructions on how to use, configure and extend the TV/Satellite & Telephone/Data systems within the apartments at Merchant Square Building D
Latest Revision:	www.AbleIS.co.uk/MerchantSquare

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1 Introduction

This guide is aimed for tenants of the Apartments at Merchant Square Building D.

The Merchant Square dwellings are equipped with general purpose:

- TV and Satellite reception system
- Telephone/Network system

Whilst these systems are configured to provide adequate TV and Telephone services, there may be significant benefits from understanding how to extend and re-configure the systems to provide more flexible options.

For example, the TV system as installed will only provide satellite signals to the Lounge and terrestrial signals to bedrooms. This guide will show you how to re-configure the system to watch and control the Lounge Sky box in any bedroom or use satellite in any bedroom.

As a further example, the Telephone/Data system as installed will only provide the main telephone line to some of the outlets. This guide will show you how to re-configure the system to provide a second telephone line to any chosen outlet.

This guide describes what the systems do and how to set them up to provide a broader variety of functions.

Note that this guide is aimed at people who have some experience of plugging in and setting up TV's or telephones. If this does not apply to you, please show this guide to the person who is assisting you to set up the TV's and Telephones in your apartment.

2 Support & Assistance

2.1 General Help & Advice

If you require help, please contact the Merchant Square managing agent, who will do their best to assist.

2.2 In Depth Help

For more in depth help, feel free to contact Able, who installed and maintain the system.

Able offer a chargeable consultancy service to Merchant Square tenenats for the setting up and configuring of Audio Visual and Computer systems.

Able Infrastructure Solutions
Able House
1 Figtree Hill
Hemel Hempstead
Herts
HP2 5XL
Tel: 01442 219580

Please call during normal working days 8:30 – 17:30.

Alternatively visit the Able web site at www.AbleIS.co.uk/MerchantSquare where information about new products and services will be shown.

2.3 Download This Guide

For the latest online version of this manual, visit the Able website at www.AbleIS.co.uk/MerchantSquare

2.4 Cables & Parts

The system is supplied with a base set of cables. However, when you are connecting up equipment, you may require additional cables and parts.

A list of the most common parts may be found in Appendix E. These part numbers are referenced in this guide as they are mentioned and shown in *blue italics*.

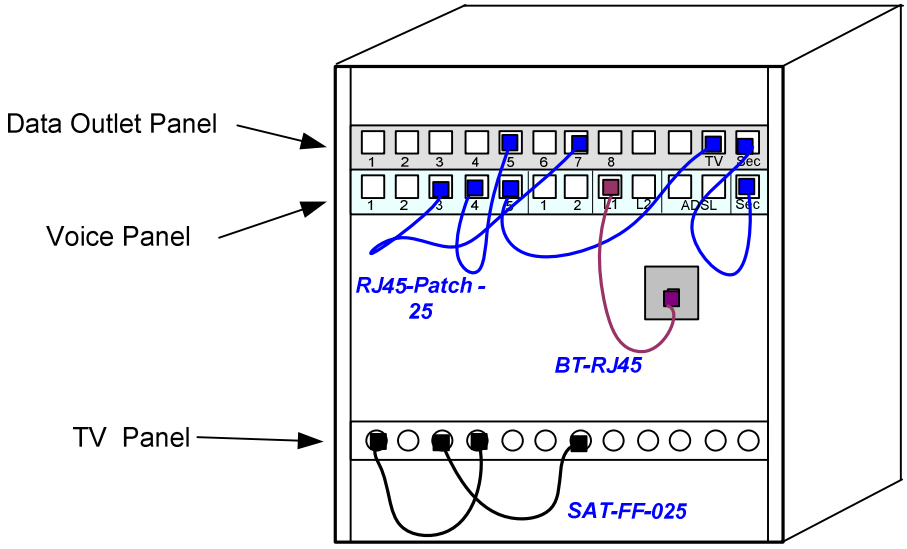
If a particular part is difficult to source this way, they can be obtained from Able, details as above. Please call for more information and prices.

3 Equipment Cabinet

All apartments are equipped with a 30cm wide equipment cabinet.

3.1 Cabinet

Most changes to the system will be done in the equipment cabinet. The equipment cabinet is a small white wall mounted cabinet which can be found in the services cupboard. All of the Data/Telephone outlets around the dwelling cables are connected back to the equipment cabinet.



Most changes can be made by re-patching the patch panels within the equipment cabinet (see next section).

More advanced changes can be made by adding equipment to the cabinet. A power socket is provided outside the cabinet to power such devices. The Equipment Cabinet will house any standard 10-inch mounting equipment.

3.2 Patching

Patching is a term used to describe connecting two sockets on a panel with a patch lead. The patch leads are designed to be easily plugged or unplugged onto/from the patch panels.

In the Equipment Cabinet, two main types of patch lead are used:

- Data patch leads *(RJ45-Patch-025)* (sometime called RJ45 patch leads or patch cords). These are used to interconnect sockets on the Data Panel and Voice Panel.
    - To disconnect one end of a lead (the RJ45 plug), squeeze up the plastic end at the bottom of the and then pull out.
    - To re-connect a lead, push into the socket (ensuring the right way up) until it clicks into place.

- TV patch leads *(SAT-FF-025 or SAT-FF-050)*. These are used to interconnect sockets on the TV panel.
    - To disconnect one end of a lead (the F-plug), screw the metal cap anti-clockwise until it come off. Then pull out the lead.
    - To re-connect a lead, carefully push the central copper wire into the socket central hole and then screw the metal cap clockwise until finger tight.

3.3 Leads

The system is installed with sufficient leads to do basic patching. The system was installed in 2010 with:

- One RJ45 data patch lead for every pair of data outlets plus one (see Section 5.2).
- The quantity of TV leads as shown in the schematics in Appendix E. This will be four for studio apartments, six for one bed, nine for two beds, ten for three bed and eleven for four beds.

However, to connect telephones, televisions, Sky boxes or other equipment, additional leads will be required. Certain leads may be purchased from Able as described in Section 2.4.

The convention used in this guide is that the last three digits of a lead part code refer to the length of the lead in cm. However, if the last three digits are xxx, the lead may be of any suitable length, depending on the requirement. Hence for example, *RJ45-Patch-200* refers to a 2 metre RJ45 patch leads whilst *RJ45-Patch-xxx* refers to an RJ45 patch lead of any length.

4 The TV System

4.1 General Capability

Each apartment is provided with signals to allow receiving of any of the following:

- **Standard Analogue Terrestrial TV** (BBC1, BBC2, ITV1, CH4, CH5). These will operate until sometime in 2012 when the Analogue channels are scheduled to be turned off completely. After that date, FreeView or freesat will be the main ways of receiving subscription free TV services. If your TV is not equipped with an integrated digital tuner, you will still be able to receive standard TV by purchasing either a FreeView or Freesat set top box
- **FreeView & FreeView HD**. This provide the same five channels analogue channels plus a large number of other free to view channels, such as BBC3, BBC4, BBC News 24, ITV2, ITV3, ITV4. A small number of FreeView HD channels will also be available in the Paddington area.
- **freesat**. freesat is a subscription free satellite service. Very similar to FreeView, freesat provide a large number of subscription free TV and radio channels, including a small number of HD channels. A reason for selecting freesat over FreeView is that the higher bandwidth capacity of satellite means that eventually the freesat service should be able to offer a broader selection of channels and services. Some newer TV's come with an integrated freesat receiver.
- **Sky Digital**. Sky or Sky+, including Sky+HD & Sky 3D services.
- **Hotbird Satellite**. The Eutelsat Hotbird family of satellites, located at 13° east. These transmit a broad range (over 1,000) of European and Arabic language channels, both free-to-air and subscription.
- **FM and DABS Digital Radio**.

These signals are provided from a centralised reception system in Merchant Square Building D and should always be of the highest quality.

4.2 Restriction on Satellite Services

There are a total of four Satellite/TV feeds coming into each apartment as follows:

- 2 x Astra Satellite (used for Sky & freesat) + Terrestrial services.
- 2 x Hotbird Satellite + Terrestrial services.

This restricts the use of multiple satellite receivers within an apartment.

For Astra, the limits are:

- Two standard Sky/freesat receivers **or**
- One Sky+/SkyHD/freesat+ receiver.

Therefore for example, it is not possible to utilise a SkyHD box in one room and standard Sky box in a separate room, since this would require three satellite feeds. Note however, that the Sky+HD box can be configured to use a single feed only (See Appendix D for instructions), in which case it becomes equivalent to a standard Sky box for the purpose of these options.

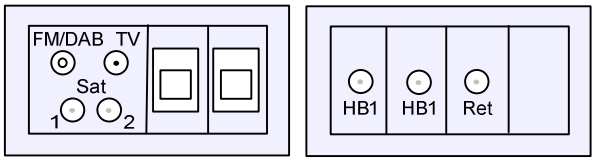
Similar restrictions will apply to Hotbird receivers.

Note that there are no restrictions on the Terrestrial TV & Radio services. Any number of TV's can be used.

4.3 Lounge TV Outlets

The lounge TV outlets should appear similar to those indicated in the schematic below.

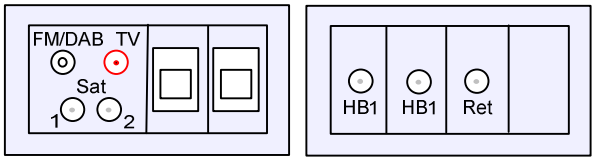
- The sockets on the left hand plate provide Sky & freesat satellite signals whilst the sockets on the right hand plate provide Hotbird satellite signals.
- Both plates can provide TV Terrestrial & Radio signals, although the left plate is normally used for this purpose.
- The Ret (Return) outlet on the right hand plate can be used to send signals, such as the return from a Sky Box, to the bedrooms.



Standard TV

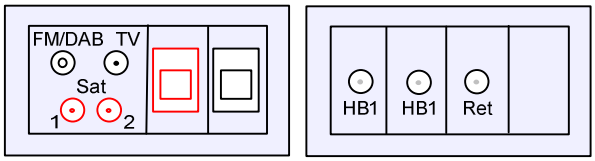
A TV plugs into the outlet marked TV (marked in red in the schematic below) using a standard TV aerial lead *(TV-Aerial-xxx)*. This outlet is the equivalent of the TV aerial socket to be found in many houses.

Either standard analogue TV or FreeView Digital TV may be received. Hence for example, a FreeView box may be connected to the TV socket as described in the instructions that come with the FreeView equipment.



Sky Satellite

If you have a Sky subscription and a Sky Digibox, you will be able to receive Sky TV. To do this connect the Sky Box to either one or both of the outlets Sat and Sat2 (marked in red in the picture below) using standard satellite leads. A standard Sky Digibox requires one connection, whilst a Sky+/SkyHD box requires two connections. See the following sections for information and examples on how to re-configure which outlets provide satellite signals.



1. Connect the Sky Digibox Dish 1 input to the Sat outlet using a satellite lead *(SAT-FF-xxx)*. If you have brought the Digbox from a home with its own Sky dish, it will not come with a satellite lead, so you will need to obtain one.

   If the Digibox is Sky+ or HD, you will also need to connect the Digibox Dish 2 input to the second satellite (also shown in red) using a second satellite lead *(SAT-FF-xxx)*.

2. Connect the telephone connection of the Sky box into a data outlet which is configured as a telephone extension, normally the one

marked in red in the schematic above. You will be able to use the standard telephone lead that came with the Sky Digibox together with a Telephone adepter (*Tel-Sec*). See section 5 for more details. This connection is only required for the reception of Sky interactive services. However, Sky may also require you to connect for contractual reasons.

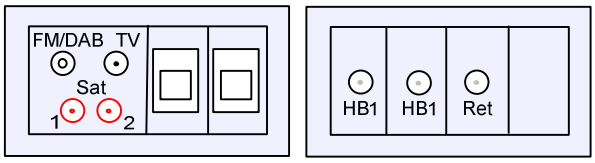
Note: If you find the Telephone connection does not work, it may be because the Telephone socket has not been properly configured in the Equipment Cabinet. See Section 5.3.

3. Connect your TV or display into the Sky Digibox using the standard TV lead, SCART, HDMI or others leads supplied with the Sky Box.
4. Connect the Sky Box Aerial Input to the TV outlet using a standard TV lead (*TV-Aerial-xxx*). Note that this connection is only necessary if you are either:
    - Connecting your TV to the Sky Box via a TV aerial lead (see previous step) and may use the TV analogue tuner to watch terrestrial TV.
    - Using the return socket to feed the Sky Box RF2 output to the bedrooms (see Section 4.6 on how to do this).

freesat

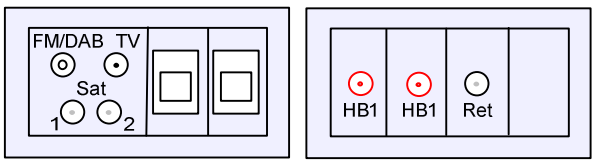
You will be able to receive freesat from the Sat1 or Sat2 socket. The method of connecting will be very similar to that described for Sky Satellite as in the previous section.

For a freesat receiver with two satellite inputs (such as TIVO where the receiver has recording capabilities) a connection to Sat2 will also be required.



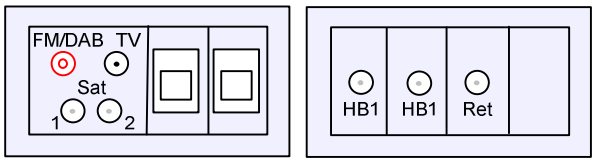
Hotbird

Hotbird satellite 13° East can be received from the two Hotbird sockets shown in red in the schematic below. You will require any standard satellite receiver (but not a Sky box), which should be plugged into one or both Hotbird sockets using standard satellite leads *(SAT-FF-xxx)*. The second sockets would be used if you are using a satellite receiver with recording features. Some channels will be free whilst others will require a subscription and viewing card. Your local satellite shop should be able to advise on the options.



Radio

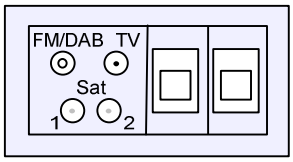
If you have an FM or DABS tuner, you can receive high quality signals by plugging the tuner into the FM outlet (shown in red).



4.4 Bedroom TV Outlets

Each bedroom will have its own quadplex TV plate which should appear similar to the one indicated in the schematic below.

By default, only Terrestrial TV and Radio signals will be available from this plate, the satellite outlets being 'dead'. This is because the default is that all of the available satellite feeds will be routed to the lounge plates. However, it is possible to re-configure the TV cabling in the Equipment Cabinet so that one or more satellite signals appear on the Sat1 and/or Sat2 outlets. See Section 4.7 for more information on how to set this up.



Standard TV

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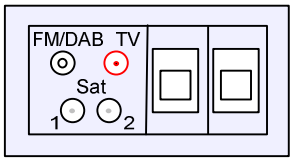

Radio

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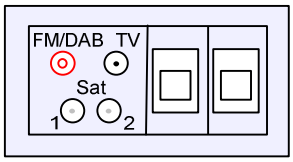
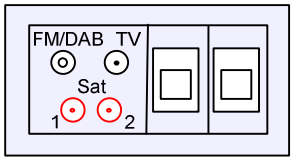


Satellite (Sky, freesat, Hotbird)

By default, the satellite outlets in the bedrooms will be 'dead', so no signal will be received if you attempt to plug in a satellite receiver. This is because by default all of the available satellite feeds will be routed to the lounge plates. However, it is possible to re-configure the TV cabling in the Equipment Cabinet so that one or more satellite signals appear on the Sat1 and/or Sat2 outlets. See Section 4.7 for how this may be done. Then, the Sky Box or satellite receiver can be plugged into one or both

of the Sat outlets (depending on what has been connected) using standard satellite leads *(SAT-FF-xxx)*.



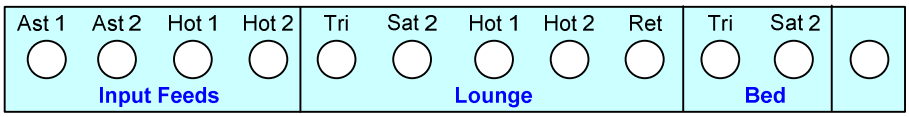
4.5 Re-configuring the TV Patch Panel

System Configuration

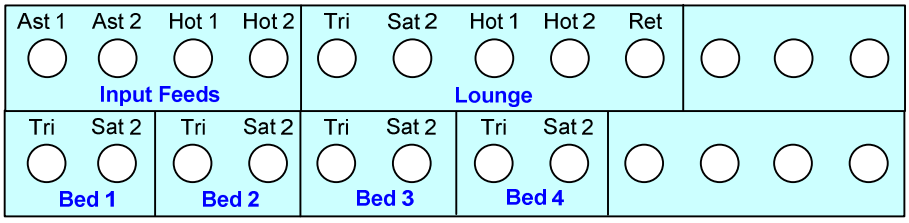
As explained in Chapter 3 of this guide, it is possible to re-configure the TV & Satellite services by changing patch connections in the Equipment Cabinet. This would be used for example to configure which rooms the satellite feeds connect to.

Patch Panels

In order to configure which TV outlet receives signals, some re-configuration of the TV patch panel(s) within the cabinet may be required. The TV patch panel(s) are located within the Equipment Cabinet and should appear as one of the schematics below.



Studio & 1-Bed Apartments



2-Bed, 3-Bed & 4-Bed Apartments

Panel Layout

Each dwelling receives four independent TV/Sat Signal feeds from the site TV distribution system. These are presented on the first four outlets of the top patch panel. In addition to a (switchable) satellite feed, each of the four signals carries the full set of terrestrial signals, including TV analogue, TV digital, VHF and DABS.

The rest of the used panel outlets are connected to the TV outlets within the dwelling, five to the Lounge Sockets and two to each of the Bedroom Sockets.

- The 'Tri' (short for triplex) refers to the FM/DAB-TV-Sat1 trio of outlets which appear in each room. These outlets are all fed through the same cable, the outlet plate filtering the combined signal into the three component frequencies.
- The Sat 2 refers to Sat 2 outlet which appears next to Sat 1 in each room. There is no filter on Sat 2, so although normally used for satellite signals, it can in fact also be used to connect to Terrestrial TV and/or Radio signals.

TV/Sat signals can be connected to outlets, simple by patching F-plug leads between the desired TV/Sat Signal and outlet connection.

Default Configuration

Appendix E shows the default setup, which is how all apartments were initially configured in 2010. Most of this section is written as if your current setup is default. However, if you are not the first tenant to use the apartment, previous tenants may have re-configured the system to suit their specific needs. If this is the case and something doesn't work the way you think it should or as this guide describes, it is probably worth checking your TV configuration in the Equipment Cabinet against that shown in Appendix E, in case the configuration has been changed. If it has been changed, you can always (assuming no patch lead are missing) re-patch the system to the default configuration.

4.6 Viewing Lounge Sky Box in Bedrooms

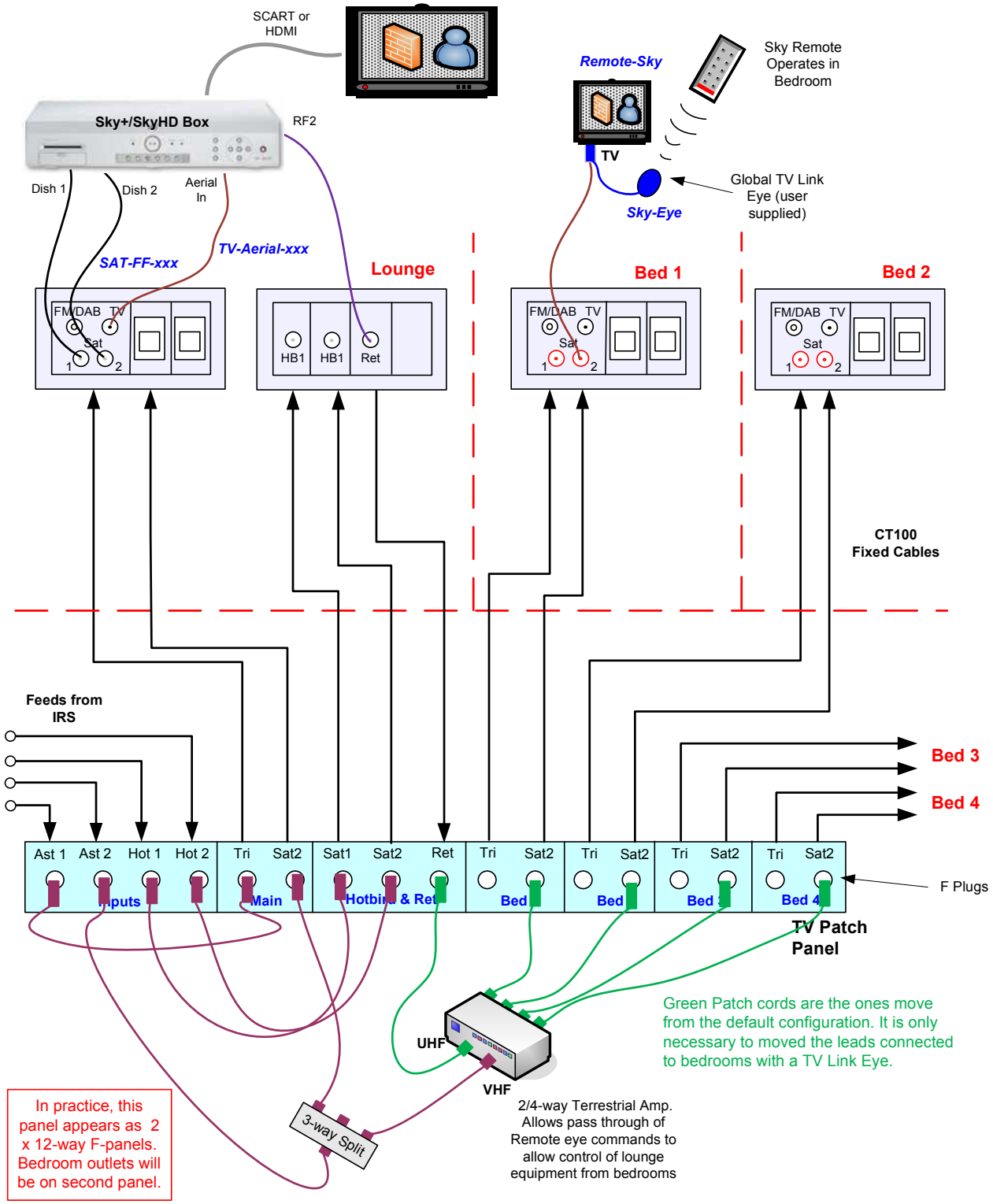
The Sky Box has the facility for the Sky to be controlled and viewed on a one or more further TV's in other rooms as an additional analogue channel. Being an analogue modulated signal, the quality of picture in the bedrooms is not typically good enough for displaying on large flat panel displays. However, for small TV sets, this is an effective and subscription free way to watch & control the Sky box from the bedroom (as long as the viewer in the lounge wants to watch the same program).

The schematic on the next page shows how the TV patching can be re-configured to support this function. The green cords are the ones that have to be moved from the default configuration (see Appendix E). The reason that the signal has to be moved to the Sat 2 outlet in the bedrooms is that a Triplex outlet does not allow DC current to pass through the TV outlet which is required to power the Magic Eye device which takes its current from the Sky box. Note that the patch change only has to be done for those bedrooms where the Magic eye will be installed.

Notes:

- As well as re-patching the TV patch panel as per the schematic below, an additional Sky Return lead will be required, to connect the RF2 of the Sky Box to the Return outlet on the Lounge Socket.
- To watch Sky on a Bedroom TV, the TV must be in analogue mode and will require tuning into the Sky channel.
- In order to control the Sky box from a bedroom:
    - A tvLINK *(Sky-Eye)* (often know as Magic eye) infrared repeater and second Sky remote *(Remote-Sky)* will be required. These are available from most TV stores.
    - The Sky Digibox will require setting up through the Installer Menu. The TVlink should come with instructions on how to do this. Alternatively, follow the instructions in Appendix C.
- The Sky Digibox can only output one channel at a time, so in multi-bedroom apartments, the TV's in every bedroom will show the same channel.

Sky Return Setup

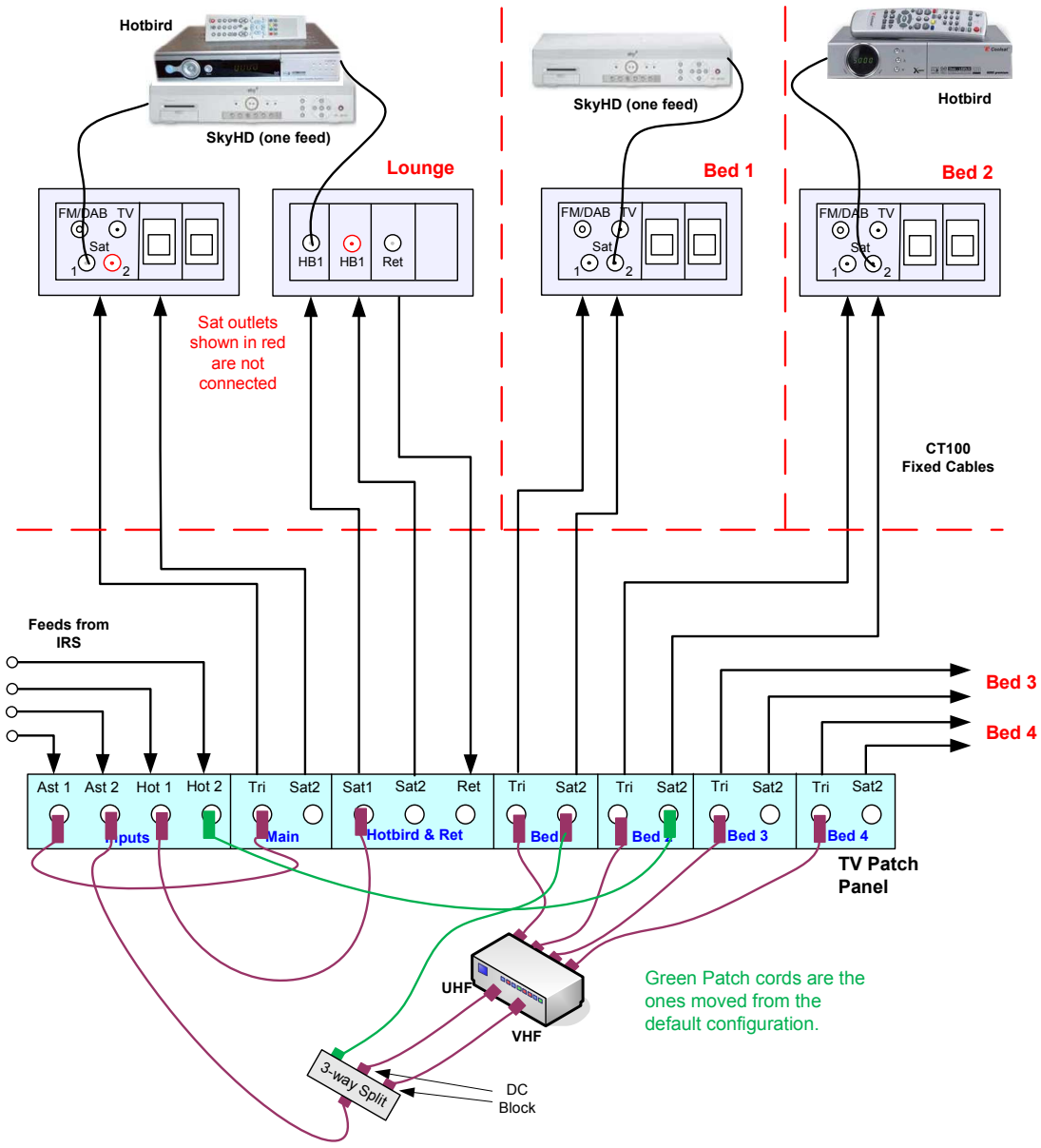


4.7 Using Satellite Receivers in Bedrooms

It is very common to want to install a satellite receiver in a bedroom. Although the default patch configuration does not support this, it is relatively easy to patch one or more satellite feeds to one or more bedrooms. In fact you can patch up to two satellite feeds to a bedroom.

Before you start reconfiguring, there is the important consideration of whether there are sufficient satellite feeds to go round; see section 4.2. For example, if you have SkyHD in the lounge which is using both Astra feeds; it is not possible to also connect a Sky feed to a bedroom (Sky multi-room). However, you could consider limiting the lounge SkyHD box to one input feed (restricting it from doing background recording), freeing up the second feed for a bedroom Sky box.

The simplest way to patch a satellite feed to a bedroom is to move the Lounge Sat2 connection (Astra) or Lounge Hotbird 2 connection (Hotbird) to the Sat2 connection of the required bedroom. The satellite receiver may then be connected to the Sat 2 outlet plate in the bedroom. The example illustrated in the schematic below shows the 2nd Astra feed linked to bedroom 1 and the 2nd Hotbird feed linked to bedroom 2.



4.8 Viewing Visitors on the TV Set

It is possible to use you TV to check the identity of visitors at the entrances to Block A and Block B.

At each of these entrances is fitted a Door Entry system with a TV camera, pointing at visitors outside the entrance. The pictures from these cameras are fed into the TV distribution system and may be viewed on any standard TV with an analogue tuner which is taking its TV signals from the communal system via the TV wall sockets.

To view the entrance on your TV:

- Tune a spare analogue channel on your TV into the appropriate camera channel. The table below shows the channel numbers and frequencies. If you need the ability to view more than one entrance, simply tune each entrance into a different channel. You can also do this with more than one TV.

- When you would like to view the camera picture, switch your TV over to the pre-tuned channel.

Note that this facility is only available for TV's with analogue tuners and when operating in analogue mode. TV's which are using Freeview or Satellite services will need to be switched over to analogue mode before the entrance camera pictures can be viewed.

Entrance	***TV Channel***	***Freq (MHz)***
Block A	***55***	***746***
Block B	***50***	***706***

5 The Telephone & Data System

5.1 Introduction

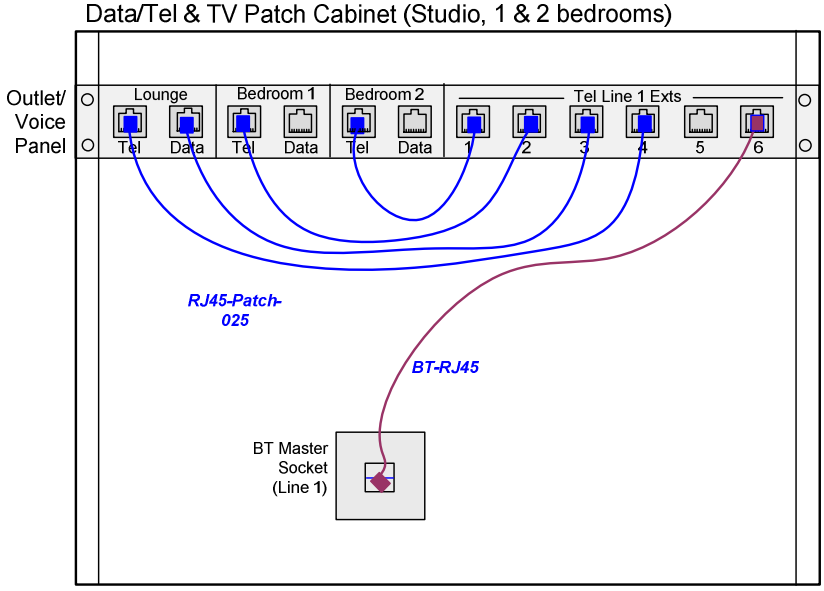
There are a number of telephone/data outlets distributed around the apartment. More precisely, there are two per multimedia plate, so there will be two in the lounge and two per bedroom. These are standard RJ45 Cat5e structured cabling outlets, connected back to the Equipment Cabinet.

The most common use of the data outlets is for plugging in telephones. However, they may also be used for other applications such as computer networking, TV distribution or any other application that can run over standard Cat5e structured cabling.

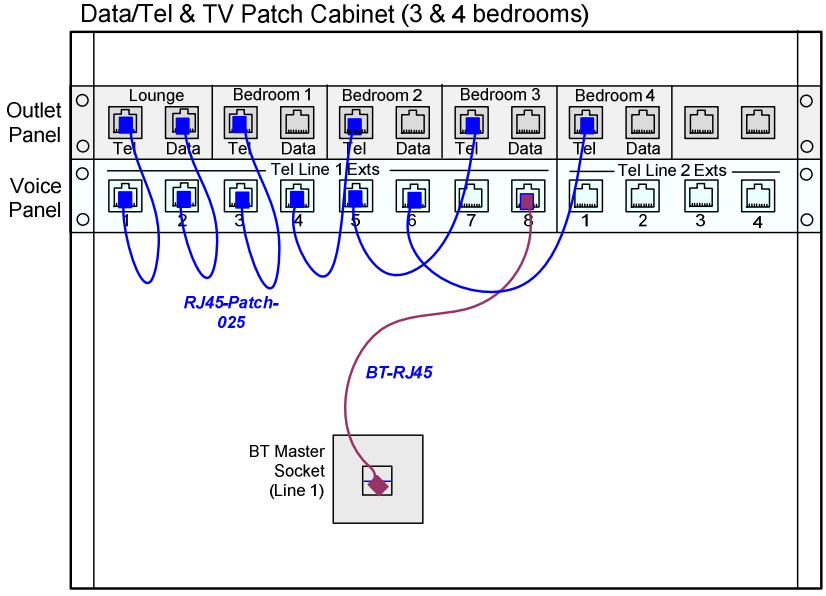
5.2 Inside the Equipment Cabinet

The schematics below show the data panel setups for different apartment types. The patch connections shown reflect the ones connected when the system was first commissioned in Oct 2010, providing telephone extensions to all of the left hand data outlets plus one to the right hand data outlet in the lounge.

Data/Tel & TV Patch Cabinet (Studio, 1 & 2 bedrooms)



Data/Tel & TV Patch Cabinet (3 & 4 bedrooms)



Data Outlets

Each data outlet in the apartment is presented as an RJ45 socket on the Outlet patch panel. You will be able to work out which by referring to the labelling.

Voice Connections

Studio, 1-Bed & 2-Bed Apartments

The BT primary line will be connected to the six rightmost sockets on the Outlet/Voice patch panel (labelled 1 to 6), which act as extensions to that line. Although it is possible to plug a telephone directly into any of these sockets, you would normally patch these sockets to outlet sockets of your choice, allowing you to plug telephones into the wall outlets around the dwelling.

3-Bed & 4-Bed Apartments

The second panel is the voice panel, onto which the BT extensions are presented.

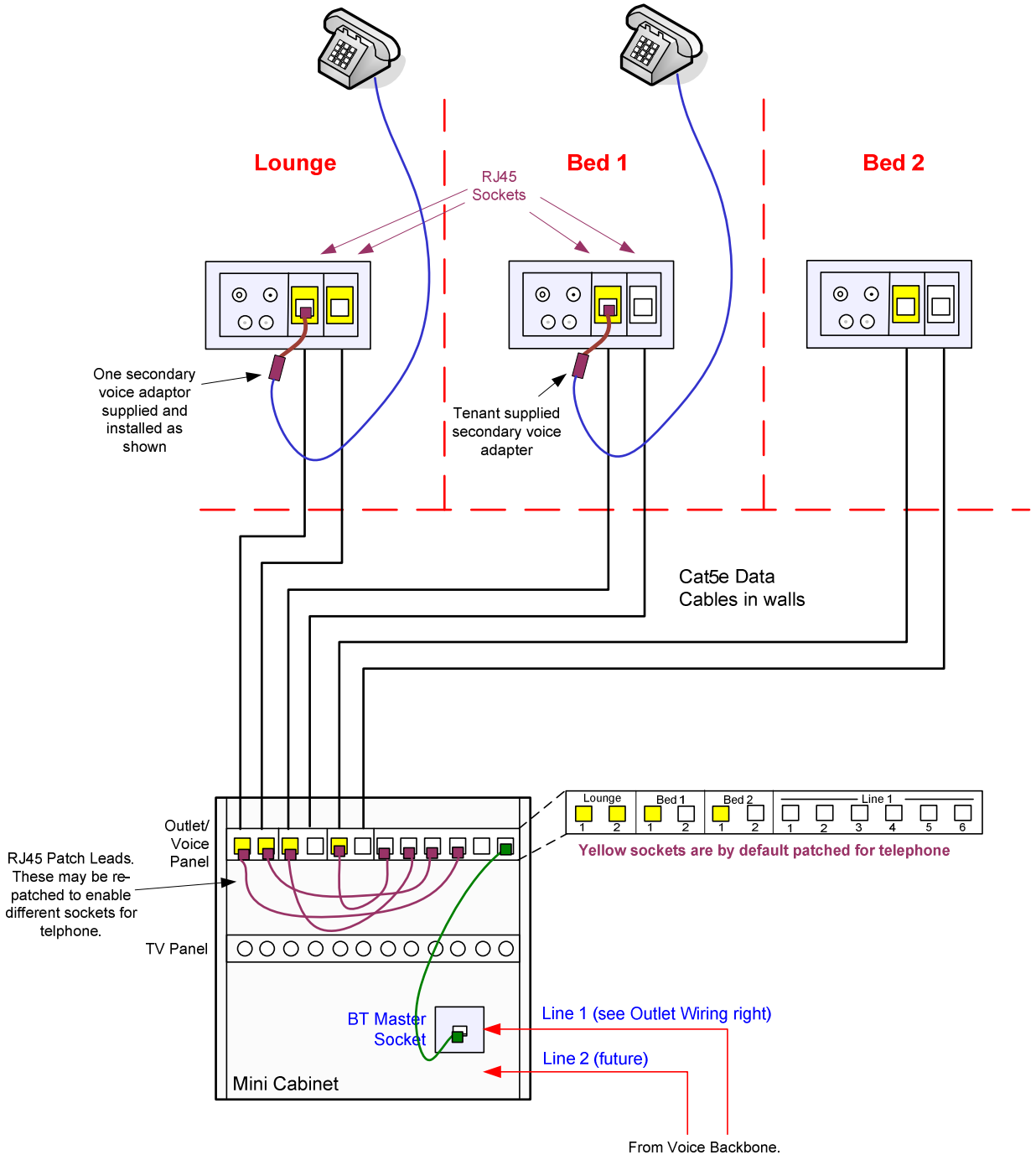
- **Line 1**. The BT primary line will be connected to the eight leftmost sockets on the panel (labelled 1 to 8), which act as extensions to that line. Although it is possible to plug a telephone directly into any of these sockets, you would normally patch these sockets to outlet sockets of your choice, allowing you to plug telephones into the wall outlets around the dwelling.
- **Line 2**. If a second external telephone line is required (for example a fax line), this can be connected to the voice panel and will appear on the remaining four sockets. As per Line 1, these can be patched through to any outlets of your choice. Note that you will need to obtain an additional BT-RJ45 lead *(BT-RJ45)* and use this to connect the BT second socket to the voice panel (L2 socket).

For extreme technical types, Appendix A details the voice panel wiring schematic and Appendix B the BT-RJ45 lead pin out.

5.3 Connecting Telephone Extensions

If some of the previous section was a little difficult to follow, do not fear - connecting a telephone is simple:

1. Plug the telephone (or Sky Box) into a free data outlet. To do this you will require an RJ45-BT secondary adapter *(Tel-Sec)*. The left hand socket in the lounge was pre-fitted with a secondary adapter which can be unplugged and used elsewhere. By default, all left hand sockets of each pair will be telephone enabled plus the right hand socket in the lounge.
2. If the telephone does not appear to be connected, check in the Equipment Cabinet whether the outlet that you have just plugged into is patched into a Line 1 extension. If not, use a free RJ45 patch lead *(RJ45-Patch-025)* to connect your chosen socket on the data panel to a free socket voice socket.



5.4 Connecting a Second Telephone Line

Studio/1/2 Bed Apartments

If a second external line is connected, it should be installed by BT as a second BT socket within or next to the equipment cabinet. You can then connect this socket to any one data port using a BT-RJ45 lead *(BT-RJ45)*.

3/4 Bed Apartments

If a second external line is connected, it should be installed by BT as a second BT socket within or next to the equipment cabinet. You will then need to connect from this socket into the L2 socket of the voice panel using a BT-RJ45 lead *(BT-RJ45)*.

You will then be able to connect telephones and other devices to the second line by patching outlets to the three extensions on the voice panel, as per previous section.

5.5 ADSL Broadband

ADSL is the most popular broadband method of connecting to the Internet.

There are two main schemes for connecting broadband within your dwelling

ADSL Modem/Router in the Equipment Cabinet

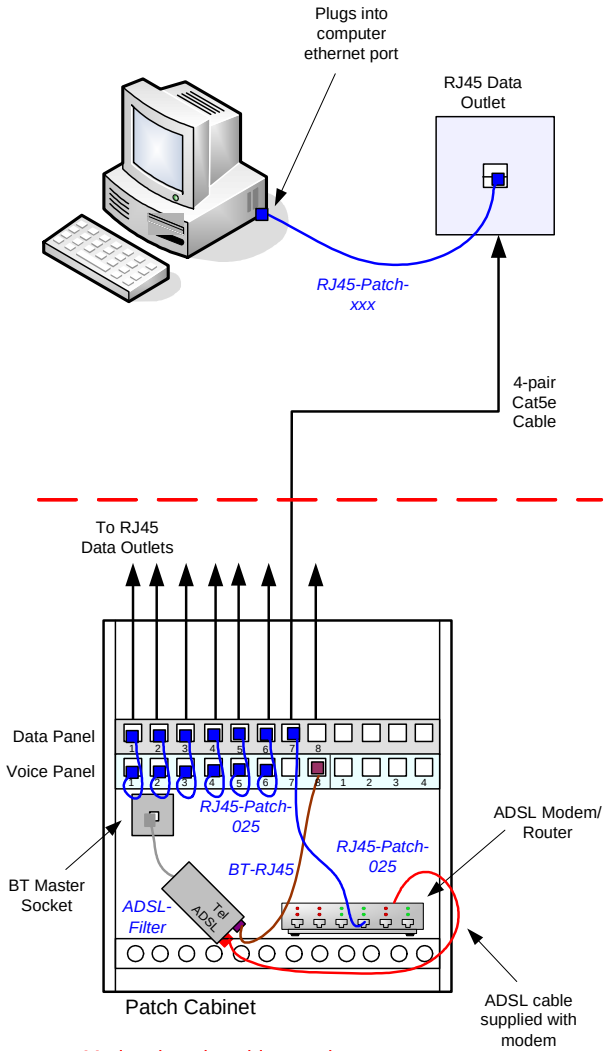
This method provides the most flexible solution.

When ordering the ADSL connection, make sure that it comes with an ADSL modem which provides at least one Ethernet connection. Ideally it will be an ADSL modem/router which also acts as a network switch and which typically provides four network Ethernet ports. Many such modems also provide a wireless interface.

Mount the ADSL modem either in or beside (if it a wireless modem outside the cabinet is much better) the Equipment cabinet and connect it as shown in the schematic. You will then be able to connect one or more PC's to the internet by patching through to the modem as shown. Note that each PC will require an Ethernet interface.

The only down side with this method may be that the network connection uses up an outlet which would otherwise serve as a useful telephone outlet. In this case consider one of the following:

- Use a wireless connection to the computer
- Connect the data and voice links to the same outlet. It is possible to obtain combiners/splitters which allow a telephone & computer to share an outlet.

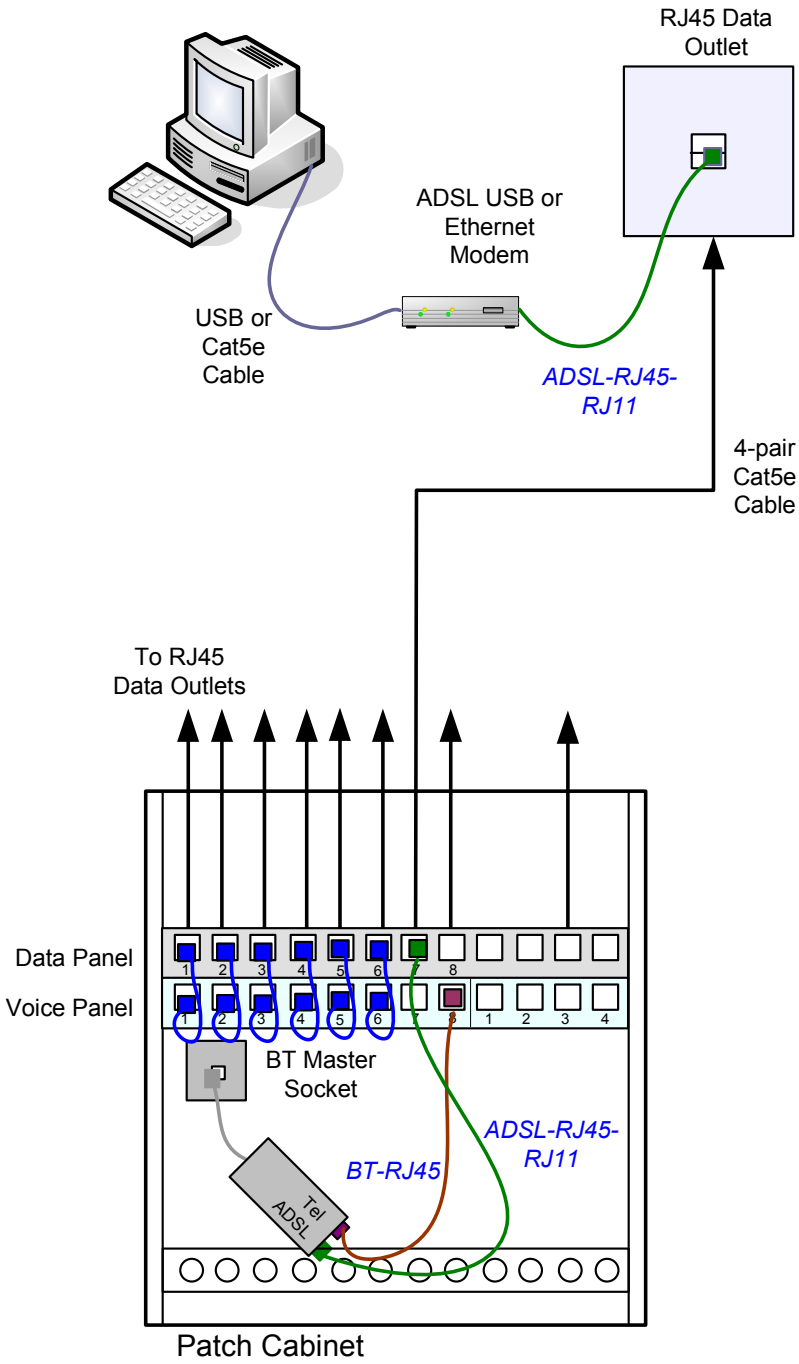


Modem kept in cabinet and connects to one or more computers through structured cabling.
Modem may also support a Wireless Interface.

ADSL Modem in the room

The other main method of installing ADSL is to put the modem next to the computer to which it can be directly connected. The modem can then be of any type (USB or an Ethernet router as described in the previous section).

To connect the modem, two RJ45-RJ11 *(ADSL-RJ45-RJ11)* cables will be required, marked in green in the schematic below.



Tip

If you connect a second ADSL filter into the wall outlet designated for the computer (you will need a Tel-sec adapter), as well as the ADSL modem (use the RJ11-RJ11 lead supplied with the modem), you will also be able to connect a telephone/fax.

6 Other Applications

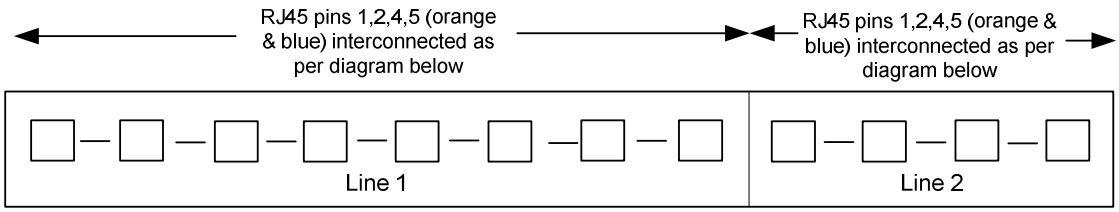
It is possible to extend the system to provide a variety of different functions.

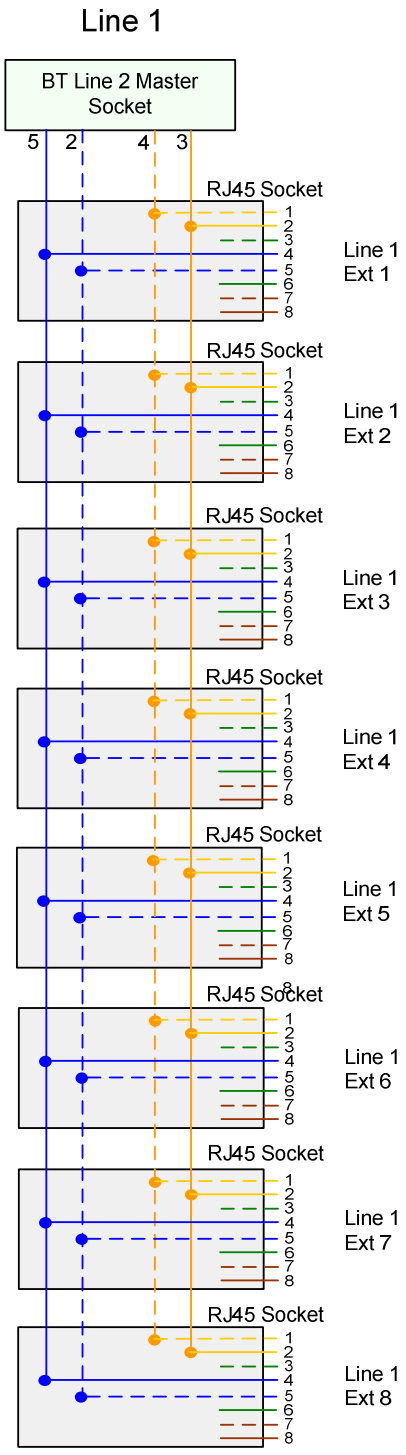
Examples are:

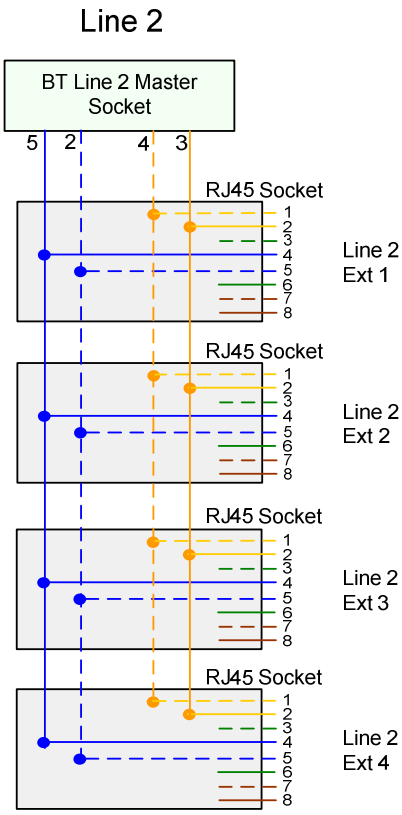
- TV distribution. It is possible to purchase equipment to allow distribution of TV via data cables.
- TV or Music Jukebox.
- Computer Network. It is possible to mount a network switch directly into the equipment cabinet which will allow PC's, printers and other network devices to inter-communicate via the RJ45 Data Sockets.
- Telephone switch. To manage multiple incoming lines and extensions a small business telephone switch could be fitted in the equipment cabinet.

Feel free to Call Able to discuss these ideas. Alternatively visit the Able web site. See Section 2.2 for details.

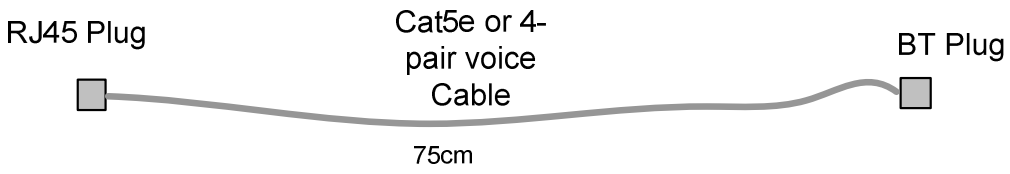
Appendix A Voice Line Circuit Information


RJ45 pins 1,2,4,5 (orange & blue) interconnected as per diagram below
RJ45 pins 1,2,4,5 (orange & blue) interconnected as per diagram below
Line 1
Line 2


Line 1
BT Line 2 Master Socket
5 2 4 3
RJ45 Socket
1 2 3 4 5 6 7 8
Line 1 Ext 1
Line 1 Ext 2
Line 1 Ext 3
Line 1 Ext 4
Line 1 Ext 5
Line 1 Ext 6
Line 1 Ext 7
Line 1 Ext 8

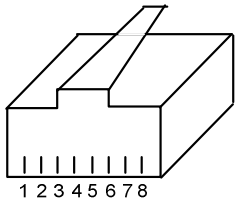


Appendix B BT-RJ45 Patch Lead Schematic

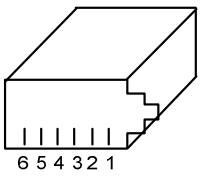


Pin Outs

RJ45 Panel	BT
1 Connected	1 Not Used 1
2 Bell	2 BT Line In B
3 Not Used 1	**3 Bell**
4 BT Line In A	4 Connected
5 BT Line In B	**5 BT Line In A**
6 Not Used 2	**6 Not Used 2**
7 N/A	
8 N/A	



RJ45



BT

All Viewed front end on

Appendix C Enabling the Sky RF2 Output

By default, a new Sky Box will output nothing from the RF2 output. However once enabled, RF2 will both output the Sky channel to another TV and accept tvLINK remote commands attached to that TV.

To enable RF2:

1. On the Sky remote, select 'System Setup'.

2. Enter in sequence '0', '1' & 'Select'. This will take you to the Installer Setup Menu.

3. Select Option 4 (RF Outlets), taking you to the RF Outlets menu.

4. Set the RF Outlet Power Supply to ON (default is OFF).
5. [Another handy option here is the one to change the RF Channel Number on which the Sky outputs RF and RF2 outputs are set. This may be necessary in order to not conflict with broadcast channels or other equipment such as a VCR or DVD player. A good default channel for Merchant Square is 60, which conflict with no broadcast channels]
6. Save New Settings.

Appendix D Configuring a Sky+HD Box with a Single Satellite Seed

The Sky+HD box can be configured to operate with just one satellite input feed. This may be useful if you are using a Sky box in the bedroom, leaving just one feed for the Sky+HD box (or vice versa).

Although it is not possible to watch one channel whilst simultaneously recording another (or simultaneously recording from two different channels), once the box is configured this way, it will function correctly and will always use the first satellite feed.

To configure a Sky+HD box for a single feed (new HD menu system):

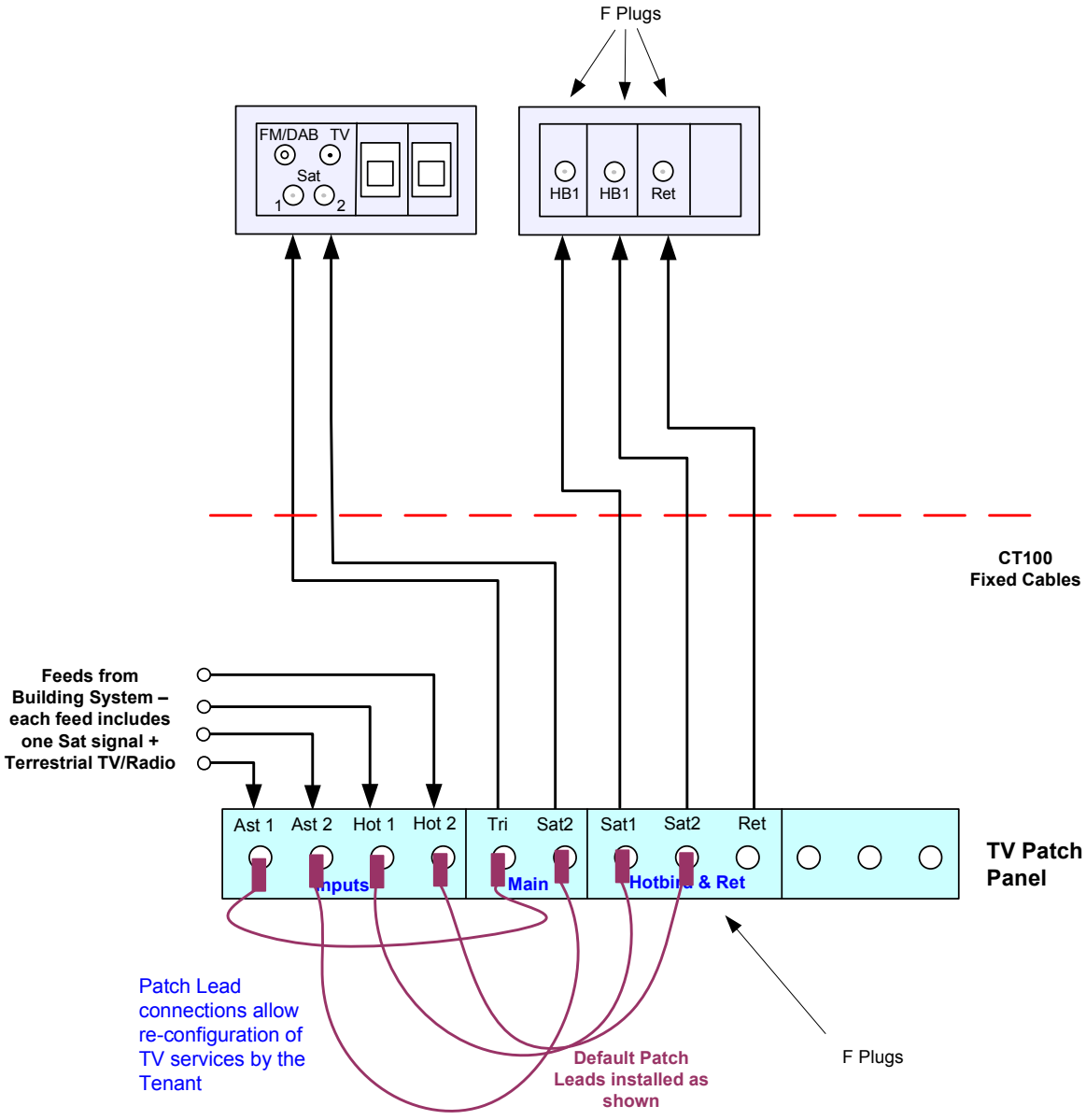
1. Make sure the satellite lead is plugged into "Dish Input 1".
2. Press Services on your remote.
3. Press Right-Arrow and highlight "Settings".
4. Press Down-Arrow and highlight "Picture".
5. Press 0, 1, Select. The "Setup" tab will now appear.
6. Scroll down and select the "Single Feed Mode" option. Press the Right-Arrow and change it from 'OFF' to 'ON'.
7. Press the Green Button to Save the settings. A 'Caution' message will appear... press 'Select'.
8. Your system will now switch-off/reboot. Leave it for a couple of minutes & then press the Sky button to bring it back to life.

Appendix E Default TV Configurations

This is the configuration that was setup and tested when the system was first commissioned by Able in October 2010.

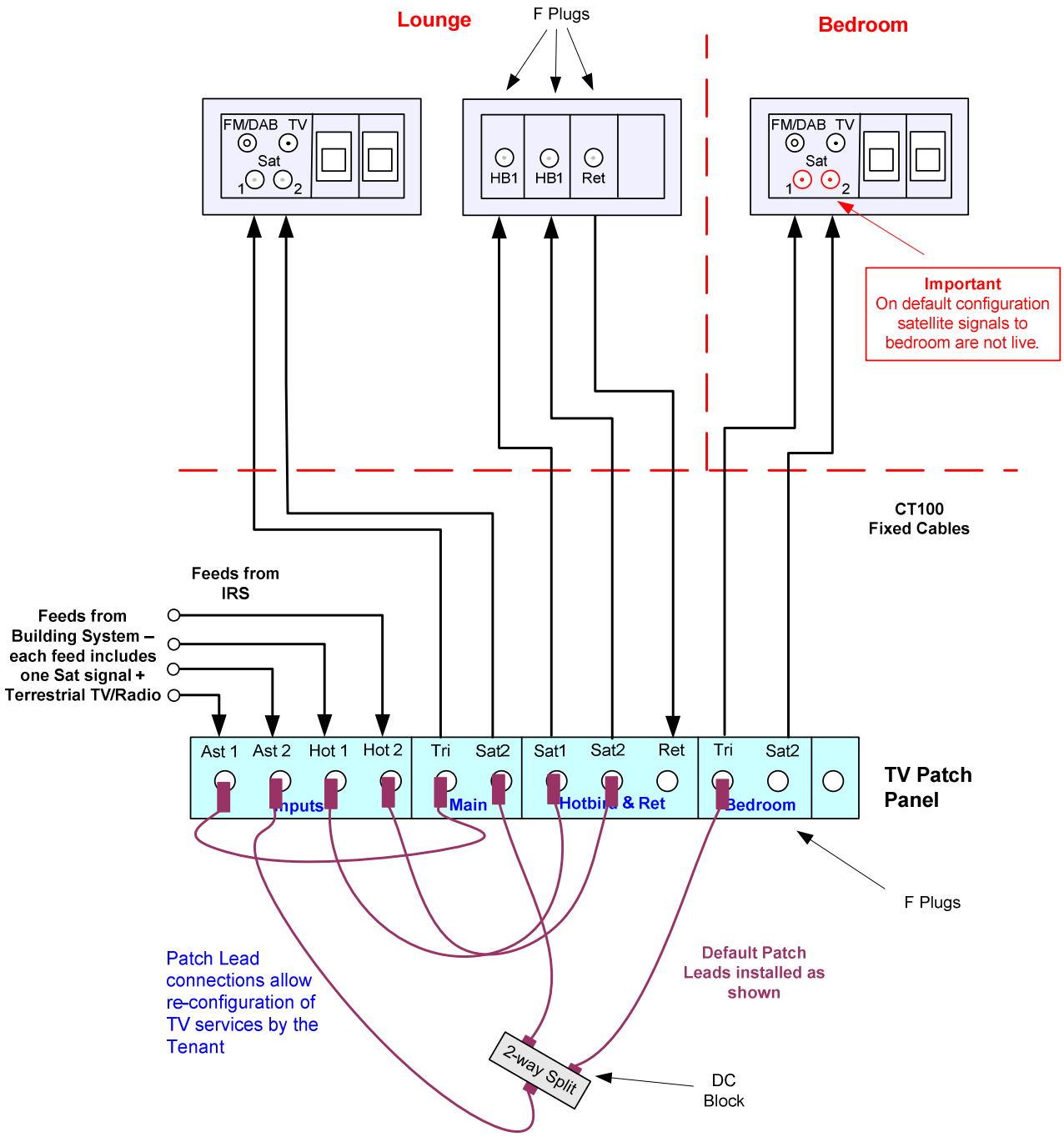
Studio Apartments

Room	TV	FM/ DABS	Sky or freesat	Sky+/HD or freesat 2nd feed	Hotbird/ Hotbird+
Lounge	✓	✓	✓	✓	✓



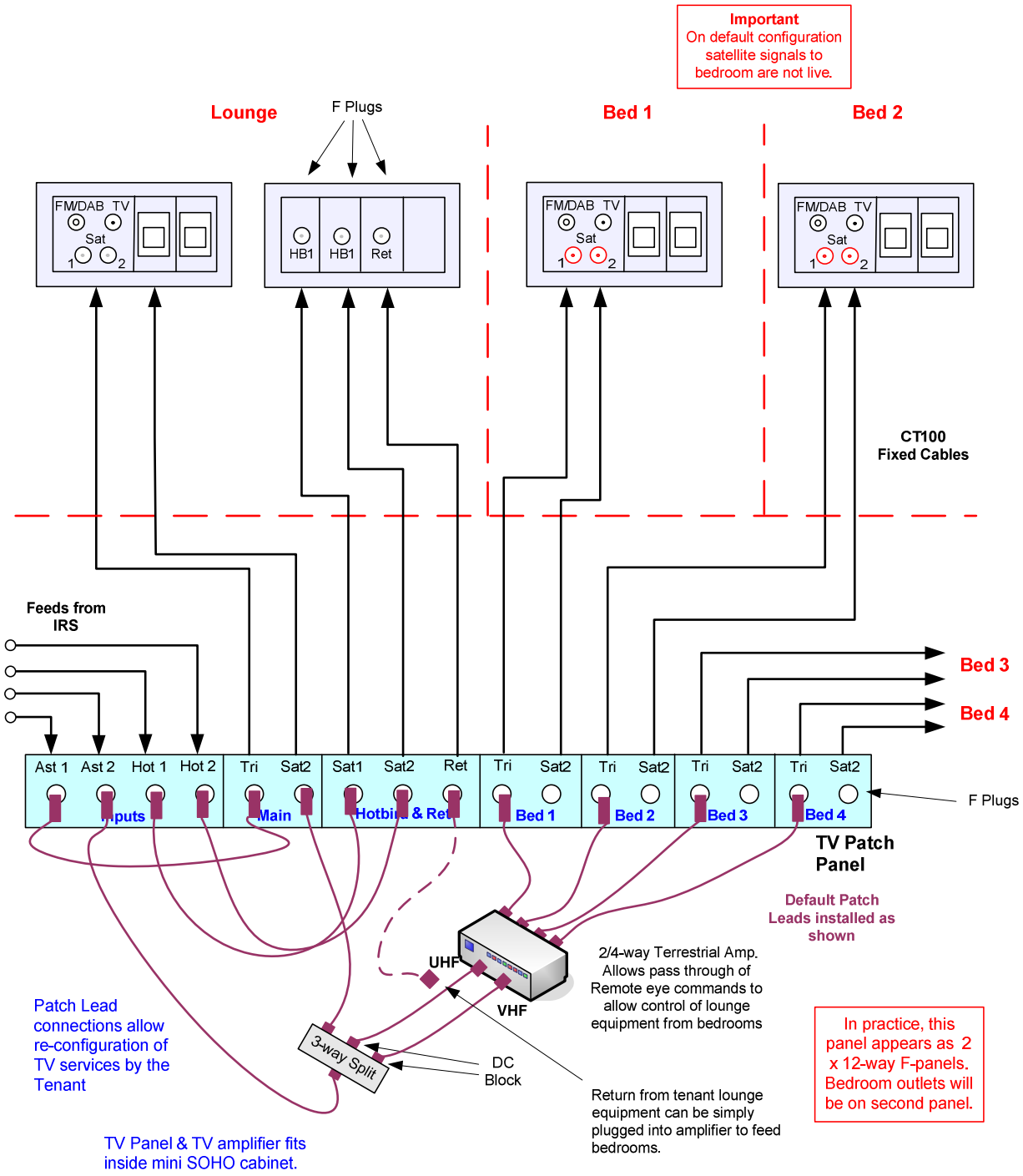
One Bedroom Apartments

Room	TV	FM/ DABS	Sky or freesat	Sky+/HD or freesat 2nd feed	Hotbird/ Hotbird+
Lounge	✓	✓	✓	✓	✓
Bedroom	✓	✓			



Two/Three/Four Bedroom Apartments

Room	TV	FM/ DABS	Sky or freesat	Sky+/HD or freesat 2nd feed	Hotbird/ Hotbird+
Lounge	✓	✓	✓	✓	✓
Bedrooms	✓	✓			


Important
On default configuration satellite signals to bedroom are not live.
Lounge
F Plugs
Bed 1
Bed 2
FM/DAB TV
Sat
1 2
HB1 HB1 Ret
CT100
Fixed Cables
Feeds from IRS
Bed 3
Bed 4
Ast 1 Ast 2 Hot 1 Hot 2 Tri Sat2 Sat1 Sat2 Ret Tri Sat2 Tri Sat2 Tri Sat2 Tri Sat2
Inputs
Main
Hotbird & Ret
Bed 1
Bed 2
Bed 3
Bed 4
F Plugs
TV Patch Panel
Default Patch Leads installed as shown
UHF
VHF
2/4-way Terrestrial Amp. Allows pass through of Remote eye commands to allow control of lounge equipment from bedrooms
3-way Split
DC Block
Patch Lead connections allow re-configuration of TV services by the Tenant
Return from tenant lounge equipment can be simply plugged into amplifier to feed bedrooms.
In practice, this panel appears as 2 x 12-way F-panels. Bedroom outlets will be on second panel.
TV Panel & TV amplifier fits inside mini SOHO cabinet.

Appendix F Commonly Used Leads & Parts

Part No	Description	Use
Telephone		
Tel-Sec	Secondary Cat5 Adapter	Plug telephone into wall sockets
BT-RJ45	BT to RJ45 Lead (0.5m)	Connect BT 1st or 2nd line into SOHO voice panel
ADSL		
ADSL-RJ45-RJ11	ADSL RJ11 to RJ45 Lead	Connect ADSL USB modem to wall socket. Two required.
Cat5e Data/Voice Patch Leads		
RJ45-Patch-025	Cat5e RJ45-RJ45 Patch Lead (0.25m)	General patch lead for SOHO cabinet
RJ45-Patch-100	Cat5e RJ45-RJ45 Patch Lead (1m)	General patch lead for computer into wall
RJ45-Patch-200	Cat5e RJ45-RJ45 Patch Lead (2m)	General patch lead for computer into wall
RJ45-Patch-300	Cat5e RJ45-RJ45 Patch Lead (3m)	General patch lead for computer into wall
Satellite/RF Leads		
SAT-FF-025	Satellite Lead (0.25m) F-plug to F-Plug.	Short TV Sat lead for SOHO cabinet – typically used for patching on panel
SAT-FF-050	Satellite Lead (0.5m) F-plug to F-Plug	Short TV Sat lead for SOHO cabinet – typically used for patching on panel
SAT-FF-200	Satellite Lead (2m) F-plug to F-Plug	TV Sat lead for connecting Sky box to wall socket. Sky+/HD requires two leads.
SAT-FF-300	Satellite Lead (3m) F-plug to F-Plug	TV Sat lead for connecting Sky box to wall socket. Sky+/HD requires two leads.
TV Aerial Leads		
TV-Aerial-200	TV Lead (2m). IEC Male to IEC Female.	TV lead for connecting TV to wall socket or Video to TV.
TV-Aerial-300	TV Lead (3m) IEC Male to IEC Female.	TV lead for connecting TV to wall socket or Video to TV.
Sky Return Leads		
Sky-Return-200	Sky Return to F-Plug (2m). IEC Female to F-Plug.	Connect Return from Sky box to Sat2 wall socket to watch Sky in bedrooms
Sky-Return-300	Sky Return to F-Plug (3m) IEC Female to F-Plug.	Connect Return from Sky box to Sat2 wall socket to watch Sky in bedrooms
TV Parts		
Remote-Sky	Sky Digibox Remote Control	Spare remote. Use with TV Link for remote in 2nd room.
Remote-Sky+	Sky+/HD Remote Control	Spare Sky+/HD remote. Use with TV Link for remote in 2nd room.
Sky-Eye	Global TV Link Eye (Black)	Allows control of a Sky Box in another room. May be used with Sky or Sky+/HD.